

Scent in Mail: The Effect of Scented Direct Mailings

Martin Amsteus, Simon de Vries, Vidar Hwang
 Linnaeus University, Sweden
Martin.Amsteus@lnu.se

Abstract: The purpose of the present study is to test the effect of scent on response time and sales in direct mailings. It is proposed that congruent scent influences response time and sales in direct mailings. A total of 1571 direct mailings were sent out. The hypotheses were tested through a Mann-Whitney U test and a Wilcoxon signed-rank test. The results show that scent influences response time to direct mailings but that it does not influence sales. Future research should perform exploratory studies to test the effect of scent with regard to various forms of direct marketing and offerings as well as in general product and service contexts. Managers may want to consider scenting direct mailings when a fast response is critical. The result provides empirical support for the idea that scent has an effect on response time in direct mailings.

Keywords: *Scent in mail, direct mailing, response time*

1. Introduction

Increasing competition in many markets has forced managers to find new ways to efficiently reach consumers (Morrison, Gan, Dubelaar, & Oppewal, 2011). One recent approach that companies have begun to use in order to tailor their offerings and their communication is sensory marketing (Spence, 2012). Sensory marketing is aimed at stimulating the consumer through the five senses: sight, hearing, touch, taste and smell (Lindstrom, 2005). Stimulation of consumers' senses can evoke feelings and memories, which in turn influences consumer behavior (Hultén, Broweus, & Dijk, 2009). Certainly, many practitioners are aware that sensory marketing can have an effect on sales, product evaluations and customer satisfaction (Bellizzi, Crowley, & Hasty, 1983; Turley & Milliman, 2000) (cf. Davies, Kooijman, & Ward, 2003; Mattila & Wirtz, 2001; E. Spangenberg, Crowley, & Henderson, 1996). Researchers have manipulated sensory stimuli such as music, colors and various shop fittings (cf. Turley & Milliman, 2000). In comparison to such stimuli, *scent* can be closely associated to specific products (Parsons, 2009) (cf. Odeh & As'ad, 2014). The aroma of freshly baked bread in bakeries or butter popcorn at movie theaters is closely associated with products, and the scents are perceived by many consumers as natural elements of the environment (cf. Bone & Ellen, 1994; Verma, 2014). However, the effects of scent have often been overlooked in research on sensory marketing (Bone & Jantrania, 1992; Gulas & Bloch, 1995; Hultén et al., 2009) (cf. Cirrincione, Estes, & Carù, 2014), and very much so in research on *direct mailings*.

Research on scent can at least be traced back to the early 1930's, when it was found (Laird, 1932) that a clear majority of subjects preferred socks scented with narcissus over of unscented socks. More than three decades later, a similar study (Cox, 1967), this time using the scent of oranges, found that almost 90 percent of the respondents preferred the orange-scented socks over the unscented duplicates, as the scented socks were perceived to be better quality (Cox, 1967). In more recent studies it has been found that, for example, ambient congruent scents can increase consumer brand recall (Morrin & Ratneshwar, 2000). However, one problem of the previous research is that it was almost entirely limited to products, brands or venues (Teller & Dennis, 2012). Research that extends beyond product-specific environments (bakeries, cinemas, flower shops, etc.) is relatively limited (Bone & Ellen, 1998; Orth & Bourrain, 2005). To get a broader picture, further research should be performed outside the mentioned settings (Teller & Dennis, 2012). Indeed, the need for more research on the effect of scent has been noted (Knasko, 1995; Morrin & Ratneshwar, 2000) (cf. Jacob, Stefan, & Gueguen, 2014; Spangenberg et al., 1996). One area that remains unexplored is direct mailings. Direct mailings is a massive industry estimated to have generated, for example, 12 billion U.S. dollars in the U.S. and 2 billion GBP in the U.K. in 2014 (Statista, 2014), and importantly, the design of direct mailings is considered to be

critical to their success (Feld, Frenzen, Krafft, Peters, & Verhoef, 2013). Consequently, this study tests the effect of scent on response time and sales in reply to direct mailings.

2. Theory and Hypotheses

Within basic marketing, direct mailing is described as a cost effective way for businesses to reach out to targeted markets. Direct mailing may also be referred to as direct marketing, which includes several approaches ranging from email, web ads, and television commercials, newspaper ads and billboards (Kotler & Armstrong, 2013). Naturally, direct mail is often perceived as unrequested mail where the sender has the intent to sell or provide information about products and services (Chang & Morimoto, 2003) (cf. Kumar & Sharma, 2014); therefore, it also often is perceived as unwanted (Kotler & Armstrong, 2013). As a result, the effectiveness of direct mailings is not a given. Managers want to make direct marketing more effective (cf. Durango-Cohen, Torres, & Durango-Cohen, 2013; Feld et al., 2013; Greenfield, 2004; Lorenzi, Friedmann, & Paolillo, 1988; Malthouse, 1999). However, while recommendations on how to make direct marketing more effective are abundant and sometimes contradictory, empirical evidence is limited. There is empirical evidence for the importance of the visual design of the envelope as a driver of opening frequency. But the opening of a direct mailing envelope is merely a must for a response to the mailing; it is not in itself causing the response rate (Feld et al., 2013). Indeed, to improve response rates managers are increasingly making use of integrated campaigns, combining direct marketing with other channels (cf. Cooper, 2010). Developments in the field of direct marketing and its various offshoots are moving towards more specialized, differentiated approaches (Cooper, 2010), and one fruitful avenue may involve sensory marketing and scent.

Smell has been considered to be one of the most enigmatic senses in humans (Hultén et al., 2009). Unlike sight, touch and hearing, the sense of smell (along with taste) is a chemical sense (e.g. Morrin & Ratneshwar, 2000). That is, the sensory receptor cells in the nose are activated by chemical molecules (e.g. Cain, 1988). Although human survival no longer depends on the sense of smell, it is still very important. Children learn early to use scent cues in their environment, including the pleasant scent of fresh food or the unpleasant odors such as those of foul food (Goldstein, 2009). Studies on this fundamental level have found that in general, a pleasant fragrance produces approach behavior while an unpleasant odor leads to avoidance behavior (e.g. Levin & McBurney, 1986; Takagi, 1989).

However, scent can influence more complex behavior and perceptions (Baron & Kalsher, 1998; Guéguen & Petr, 2006; Teller & Dennis, 2012; Ward, Davies, & Kooijman, 2007). For example, a study by Diego et al. (1998) revealed that ambient scents made respondents solve mathematical problems more quickly. And Baron and Kalsher (1998) found that a pleasant scent can improve some aspects of performance with regard to driving a vehicle. Likewise, physical performance has been shown to improve with the help of scent; Raudenbush et al. (2001) showed that the scent of peppermint could increase physical performance in athletes. In terms of consumer behavior, Spangenberg et al. (1996) tested whether an ambient scent in a store would affect consumer perception of time and their number of purchases. The results showed that with a scent present, consumers had a shorter perception of time, but there was no significant effect on sales. Orth & Bourrain (2005) found that the scent of lavender had a positive effect on consumer perception of a brand, but that risk-taking, and again, sales were not affected significantly (cf. Herrmann, Zidanek, Sprött, & Spangenberg, 2013; Madzharov, Block, & Morrin, 2015; Suha, Moonb, Han, & Ham, 2014). Additional research has shown that mood can be influenced by means of scent (Diego et al., 1998). Studies by Roberts & Williams (1992) and Warm et al. (1991) revealed that respondents' mood was positively affected by subjecting them to different scents such as vanilla, chamomile and peppermint. Lorig & Schwartz (1988) found that subjecting respondents to the scent of eucalyptus, lavender and apple increased their brain activity, decreased stress levels and ultimately had a relaxing effect. Such findings contribute to a relatively uniform perception that fragrances can have an effect on people's mood and well-being (Ehrlichman & Bastone, 1992; Hultén et al., 2009; Lorig & Schwartz, 1988).

The underlying theoretical rationale in many studies is based on the belief that scent has a hedonistic effect on humans. The rationale of the hedonistic effect implies that humans aim mainly for pleasure (Morrin & Ratneshwar, 2000). Humans primarily perceive scent in terms of comfort and enjoyment, which may be related to the fact that the area of the brain that interprets scent (the hypothalamus) also is the center of

emotions (Ehrlichman & Halpern, 1988)(cf. Bone & Jantrania, 1992). Through emotions, different behaviors can be activated and encouraged (Mitchell, Kahn, & Knasko, 1995). This line of thinking draws on the SOR(stimulus, organism, response) model(cf. Mehrabian & Russell, 1974), and likewise, much of the recent research on scent and its impact is based on the SOR model (Chebat & Michon, 2003; Donovan & Rossiter, 1994; Orth & Bourrain, 2005; Spangenberg, Sprott, Grohmann, & Tracy, 2006)(cf. Goi, Kalidas, & Zeeshan, 2014).

The SOR(stimulus, organism, response) model emerged in the 1960s against the background of findings in the social sciences, especially in psychology (Jacoby, 2002)(cf. H. Ehrlichman & Halpern, 1988). The model implies that environmental stimulus (S) causes emotional reactions in the organism (O) and thus influences the organisms' behavioral response (R)(e.g. Mehrabian & Russell, 1974). This logic is certainly in line with general behaviorism (cf. Skinner, 1974). However, the approach reflects ideas of hedonism and enjoyment as a major motive(H. Ehrlichman & Halpern, 1988)(cf. Goi et al., 2014). Specifically, the concept of stimulus-organism-response (SOR) has been deployed as a basis for explaining how pleasant fragrances and their effect can taint consumers' perceptions of products or services(Diego et al., 1998). According to the SOR model pleasant fragrance should have a positive impact whilst unpleasant odors should have a negative effect (Ehrlichman & Bastone, 1992). Over the years, the model has received backing from a variety of research results(Chebat & Michon, 2003; Orth & Bourrain, 2005; Spangenberg et al., 2006; Turley & Milliman, 2000). For example, Chebat & Michon(2003) studied consumer behavior in shopping centers and found that pleasant scents of peppermint, flowers, sandalwood and citrus had a positive impact on how consumers perceived store environment and service. Likewise, the research of Orth & Bourrain(2005) showed that the scent of lavender had a positive effect on consumers' perception of brands.

Spangenberg et al. (2006) deployed the SOR model as a basis for testing the effect of scent on variables such as perceived time spent in the environment, sales (number of items purchased as well as money spent). The results showed that there was a positive impact on both perceived time spent in the environment and sales (both on number of items purchased as well as money spent)(E. Spangenberg et al., 2006). The results with regard to perceived time spent in the environment can be related to the research of Lipman(1990), who provides evidence for how pleasant scents may increase the time customers stay in a venue. Spangenberg(1996) relates the effect on perceived time to how consumers receive an enhanced experience when they visit a store with an ambient scent, which in turn contributes to their perception of time. Comparable effects on time, or on the perception of time, have been shown in other contexts, ranging from chess games(Francis, 1987) to working hours(Lefevre, 1988). Likewise, a study done by Hirsch and Gay(1991) showed that the time spent in a scented casino was longer (compared to unscented), which in turn led to increased revenue(cf. Knasko, 1995; Leenders, Smidts, & Langeveld, 1999; Nixdorf, Teerling, & Köster, 1992). In general, it may be that the effects of scent with regard to time have to do with information processing. A study (Mitchell et al., 1995) showed that scent can affect consumer information processing; added scent resulted in increased time spent processing when evaluating a product, which in turn contributed to improving the evaluation of the product.

When it comes to the relationship between scent and sales, it has been argued that hedonistic relevance is relatively weak(Turley & Milliman, 2000). The majority of the research in the field deploys either the SOR model or congruence as a theoretical starting point(Morrison et al., 2011). Thus, as an alternative to the SOR model (and hedonistic relevance), several scholars deploy congruence as a starting point for their reasoning(cf. Bone & Ellen, 1998; Bone & Jantrania, 1992; Mattila & Wirtz, 2001; Mitchell et al., 1995). A congruent scent is consistent with the consumer's perception of what, for example, a product should smell like (Parsons, 2009). A fragrance that is not consistent is referred to as incongruent(Bone & Jantrania, 1992). Research that deploys congruence as a starting point measures the effect of the scent in relation to its various contexts (cf. Teller & Dennis, 2012). Such approaches are often based on the congruence or incongruence of scent in relation to a particular product or service. A scent that does not match its context (e.g. a particular product) is referred to as incongruent. It is generally implied that a congruent scent has a positive impact on customers' purchasing behavior and product evaluation(Parsons, 2009; Spangenberg et al., 2006).

Studies based on congruence or contextual criteria include Bone & Jantrania (1992) on perception; Davies et al. (2003) on recognition and reinforcement of experiences; Schiffer Stein & Blok (2002) on purchasing behavior and product evaluation. These studies demonstrated that products with congruent scents can attain more

positive evaluations. Specifically, sun screen lotions and detergents with a congruent fragrance (coconut and lemon respectively) were deemed more favorable by consumers in comparison to incongruent combinations (Bone & Jantrania, 1992). Several studies (e.g. Hultén, 2012; Morrison et al., 2011; Spangenberg et al., 2006) have deployed the scent of vanilla as an independent variable. It appears that vanilla can have a similar effect on both men and women; it is congruent in several contexts and generally perceived as pleasant (Hultén, 2012; Spangenberg et al., 2006). Indeed, vanilla has been found to have a slightly positive impact on consumers' purchasing behavior (Morrison et al., 2011). Comparable results have been achieved with lavender scent (Guéguen & Petr, 2006). Research has shown that a congruent scent can cause consumers to remain longer in a store (Schifferstein & Blok, 2002). As mentioned, it is implied that consumers evaluate contexts (and products) more positively when a matching scent is present. In an opposite manner, an incongruent fragrance that does not fit the context causes confusion (Parsons, 2009; Spangenberg et al., 2006). However, it has been argued that in comparison to no fragrances at all, incongruent scents still can have a positive impact on consumer behavior (Parsons, 2009). That is, it is important to consider that even incongruent scents help us to recognize and reinforce experiences in retail environments, which in turn can be utilized to influence consumer behavior (Davies et al., 2003).

From the preceding discussion it is clear that scent can influence the amount of time consumers perceive they spend or the amount they actually spend in a setting (cf. Francis, 1987; Lefevre, 1988; Lipman, 1990; Spangenberg et al., 2006) and the effect may be understood in terms of an enhanced experience (Spangenberg, 1996). In addition, increased time spent has been associated with increased revenue (Hirsch & Gay, 1991) (cf. Knasko, 1995; Leenders et al., 1999; Nixdorf et al., 1992). These effects of scent with regard to time may have to do with information processing. That is, added scent results in increased time spent processing when evaluating a product, which in turn improves consumers' evaluation of the product (Mitchell et al., 1995). Therefore, in regard to the relationship between scent and reply time to direct mailings we propose:

H1. *Congruent scent has an effect on response time in reply to direct mailings.*

Moreover, it is clear that scent can influence consumers' moods (e.g. Diego et al., 1998; Roberts & Williams, 1992; Warm et al., 1991), their brain activity and stress levels (e.g. Lorig & Roberts, 1990; Lorig & Schwartz, 1988) (cf. Ehrlichman & Bastone, 1992; Hultén et al., 2009), and various forms of product evaluations as well as purchasing behavior (Bone & Jantrania, 1992; Parsons, 2009; Spangenberg et al., 2006). Because the intent of direct mailings is to sell or provide information about products and services, we propose:

H2. *Congruent scent has an effect on sales in reply to direct mailings.*

3. Methodology

Selection: To compare the response time and sales in reply to unscented direct mailings to the response time and sales in reply to scented direct mailings, a total of 1571 direct mailings were sent out to randomly selected start-up companies (they were all registered at the Companies Registration Office in April 2014). Randomization resulted in two samples of $n=793$ for the experimental group and $n=778$ for the control group (the uneven numbers resulted from external falloff as a result of invalid or incorrect addresses revealed after the randomization process).

Measures

Scent: Two focus groups consisting of seven and eight participants respectively (five women and two men aged from 28 to 53 and three women and five men aged 20 to 55) were deployed to identify and select a scent that was considered the most congruent to the setting, i.e. to the direct mailings. The selection of the fragrances evaluated in the focus groups were all well-anchored in previous research: vanilla, citrus, lavender, peppermint and eucalyptus (cf. e.g. Bone & Jantrania, 1992; Cain, 1988; Morrin & Ratneshwar, 2000; Morrison et al., 2011; Raudenbush et al., 2001). The scents were sponsored by a company specializing in exposure and scenting of different environments. The groups were introduced to the purpose of the sessions as well as to the format of the direct mailings. The participants received paper sticks upon which the scents had been applied. The discussion then concerned the contexts with which the scents were congruent as well as which scent, if any, fit with the direct mailings. Both vanilla and peppermint was deemed suitable. The respondents associated vanilla scent with peace and credibility while peppermint represented energy and spontaneity. In the end,

peppermint was chosen as it was considered the most congruent with the direct mailings. Next a procedure for scenting the direct mailings was developed. Specifically, the direct mailings were authentic ditto consisting of two pages and a postage-paid reply form (all in a single envelope), with information about the company and their offer (the offer concerned website development and hosting). A pretest was performed by sending scented mailings through the mail to make sure that they were scented upon arrival. The results were deemed appropriate.

Response time and sales: Response time and sales were recorded for the experimental and control groups respectively. Sales could be made in two ways. One option was to submit the postage-paid reply form that came with the mailing. The other option was to go through the company website online where the same response options were available. The date of each purchase was noted to establish the response time. A purchase was recorded when an answer sheet was received or when an approved registration was made through the website.

Procedure: The direct mailings were sent out and replies were tracked for 14 days (no replies were received after 14 days). The mailings were visually identical except for the personalized names and addresses. Direct mailings for the experimental group were scented: Each mailing was sprayed on the front and on the back leaving a distinct peppermint scent. Each envelope in the experiment group was sprayed on the inside. Next, the mailings were put in the envelopes and the envelopes were sealed.

4. Results

H1-Response time: The 1571 direct mailings generated a total of 43 sales during the 14 days sales were recorded; 20 sales in the experiment group and 23 sales in the control group, hence each day represented a measure. The normality of the distribution was assessed through probability plots, kurtosis and skewness. The z coefficients for both the kurtosis and the skewness were within $\pm 2,58$ (Table 1). However, the sig. values of the Kolmogorov-Smirnov and the Shapiro-Wilk tests were below 0,05 (Table 2), signifying that the distribution was non-normal (e.g. Hair, Black, Babin, Anderson, & Tatham, 2006), and therefore a Mann-Whitney U test was used to test the hypothesis (cf. e.g. Pagano, 1994).

Table 1: Descriptive

		Statistics	Std. Error	Z-score
Scent	Skewness	1,450	,597	$1.450 / ,597 = 2.428$
	Kurtosis	2,163	1,154	$2,163 / 1,154 = 1.874$
No Scent	Skewness	,997	,597	$,997 / ,597 = 1.67$
	Kurtosis	2,026	1,154	$2,026 / 1,154 = 1.755$

Table 2: Normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Scent	,335	14	,000	,810	14	,007
No cent	,252	14	,016	,868	14	,040

The Mann-Whitney U test showed that scent did elicit a statistically significant effect on response time in reply to direct mailings ($Z = -1,972; p = 0,049$) (Two tailed). *The results reject H0. (See Table 3 and 4)*

Table 3: Mann-Whitney U

	Group	Mean Rank
Resp. days	Scent	17,98
	No Scent	25,50

Table 4: Test Statistics

Mann-Whitney U	149,5
Wilcoxon W	359,5
Z	-1,972
Asymp. Sig. (2-tailed)	0,049

H2-Sales: Because the dependent variable was measured at the interval level and the independent variable consisted of two matching pairs, and the distribution of the differences between the two groups was deemed adequately symmetrical, a Wilcoxon signed-rank test was deployed to test the hypothesis (cf. e.g. Pagano, 1994). See Tables 5 and 6. The Wilcoxon signed-rank test showed that scent did not elicit a statistically significant effect on sales in reply to direct mailings ($Z = -1,406$; $p = 0,685$) (Two tailed). *The results reject H1*

Table 5: Wilcoxon signed-rank test

	N	Mean Rank	Sum of Ranks
Negative Ranks	5 ^a	6,80	34,00
Positive Ranks	7 ^b	6,29	44,00
Ties	2 ^c		
Total	14		

a. No_Scent < Scent; b. No_Scent > Scent; c. No_Scent = Scent

Table 6: Test Statistics

	No Scent - Scent
Resp. Z	-,406
days Asymp. Sig. (2-tailed)	,685

5. Conclusion

The results show that adding scent to the direct mailings had an effect on the response time in reply to the direct mailings. Specifically, the response time was shorter when a scent deemed congruent with the direct mailing by focus groups was added. The results show that adding scent to the direct mailings had no effect on sales in reply to the direct mailings. Specifically, both in absolute numbers (20 sales in the experiment group and 23 sales in the control group) and sales ranked with each day as a measure, more sales were found in the control group. However, the difference was not statistically significant.

Discussion: The fact that scent had a significant effect on the response time underlines the general conception that scent is related to time. One obvious explanation for the relationship draws on the SOR model and that scent enhances the experience (cf. E. Spangenberg et al., 1996), which in turn influences the time spent with the direct mailing (cf. Francis, 1987; Lefevre, 1988; Lipman, 1990; E. R. Spangenberg et al., 2006). That is, the respondents may spend more time in front of the direct mailing at the moment when it is received and thus decide faster. As a consequence, and in practical terms, managers may want to consider scenting direct mailings when a fast response from the target market is critical (as a response or intervention to the actions of competitors). However, this explanation struggles when the model is extended to suggest that increased time spent processing when evaluating a product in turn improves the consumer evaluation of the offering (cf. Mitchell et al., 1995), at least in the sense that improved consumer evaluation of the offering implies, in the end, increased sales. Added scent had no effect on sales. According to the SOR model, a pleasant scent should have a positive impact, and indeed, Chebat & Michon (2003) found that peppermint is considered to be a pleasant scent. Thus, as the results show that scent had no significant effect on sales, it limits the applicability of the SOR model with regard to sales. This result is in line with several earlier studies which found no effect of scent on sales (e.g. Mitchell et al., 1995; Orth & Bourrain, 2005; E. Spangenberg et al., 1996).

Another interpretation of the observed relationship between scent and response time draws on congruence. On the one hand, congruence should contribute to an enhanced experience, in turn leading to the increased

time spent with the direct mailing and the associated improved evaluation. On the other hand, congruence by itself (regardless of the time spent) should improve consumer evaluation (again the results do not show evidence for this in terms of increased sales) (cf. Parsons, 2009; E. R. Spangenberg et al., 2006). Thus, both in terms of the SOR model and in terms of congruence, the results problematize any association between increased time spent and increased revenue (cf. Hirsch & Gay, 1991; Knasko, 1995; Leenders et al., 1999; Nixdorf et al., 1992). Previous research by Raudenbush et al. (2001) and Baron & Kalsher (1998) showed that peppermint had an activating effect and that the scent increased risk taking. Hence an alternative explanation for the faster response time is that certain scents can elicit specific responses in consumers and that the chain of causality has little to do with the SOR model or congruence.

As mentioned, Spangenberg et al. (2006) found a positive impact of scent on both perceived time spent in the environment and sales (both on number of items purchased as well as money spent). However, it appears that a critical difference between Spengenberg and earlier studies is that the former deployed gender congruent scents rather than merely ambient scent (cf. Spangenberg et al., 2006). Thus, to make the results conform to the notion of congruence, it may be argued that the added scent in the present study was not congruent enough. That is, it may be that the scent was congruent enough to enhance the experience sufficiently to cause the potential buyers who would buy the product anyway to decide or act faster. But the scent was not congruent enough to elicit additional sales. While deemed congruent by the focus group, peppermint may not be congruent enough with the direct mailings to influence sales. Consequently, an apparent limiting factor includes the potential for establishing scents strongly congruent with an offering, which in turn is decided by the characteristics of the offering, unless congruence is sought with the recipient. Congruence with the recipient could, for example, entail a male or female scent for a male respective female target market.

The results obtained and the discussion above suggests several fruitful avenues for further research. The possibility that certain scents can elicit specific responses in consumers and that the chain of causality may have little to do with the SOR model or congruence warrants more explorative studies on the effect of scents (including degrees of unpleasant scents) on direct mailings, regardless of the scents are deemed congruent or pleasant. In terms of congruence, more research is needed into what types of offerings or direct mailings allow the establishment of clearly congruent scents. Issues such as what scents are congruent with, for example, a book, a magazine, a music CD, a computer game CD, or with various consumer electronics, may depend on the media, the medium, and the target audience (this study did not take demographics into account). Various degrees of congruence with classes of offerings or with explicit contexts may be established. A related factor to consider is the level of involvement associated with the product or service being offered. An offering which is expensive and visible to others (e.g. cars, jewelry etc.) is generally a high involvement purchase. Cheap and non-visible offerings, such as for instance toothpaste and sugar, are generally low involvement purchases. It is implied that the higher the involvement, the more rational information processing is done by consumers before making a purchase (e.g. Bolting, 1988; Celsi & Olson, 1988; Kapferer & Laurent, 1985; Sarathy & Patro, 2013), which could have had an impact on the effect of scent. In the present study, website development and hosting can be considered to be a relatively high involvement purchase decision, promoting more rational information processing in turn possibly limiting the effect of scent. Thus fruitful avenues for further research include taking into account the offering or purchase situation in terms of involvement, as well as congruence, and pleasantness or unpleasantness of the scent. Moreover, assessing differences with regard to factors such as gender, age or other nominal aspects in relation to response time is likely both to help elucidate the relationships and have practical value for the direct marketing industry.

References

- Baron, R. & Kalsher, M. (1998). Effects of a pleasant ambient fragrance on simulated driving performance: The sweet smell of safety? *Environment And Behavior*, 30(4), 535-552.
- Bellizzi, J., Crowley, A. & Hasty, R. (1983). The Effects of Color in Store Design. *Journal Of Retailing*, 59(1), 21-46.
- Bolting, C. (1988). Integrating Consumer Involvement and Product Perceptions with Market Segmentation and Positioning Strategies. *The Journal of Consumer Marketing*, 5(2), 49-57.
- Bone, P. & Ellen, P. (1994). Olfaction and Marketing: Does it Make Sense to Use Scents? Unpublished working paper. Department of Marketing. West Virginia University.

- Bone, P. & Ellen, P. (1998). Scents in The Marketplace: Explaining a Fraction of Olfaction. *Journal Of Retailing*, 75(2), 243-262.
- Bone, P. & Jantrania, S. (1992). Olfaction as a Cue for Product Quality. *Marketing Letters*, 3(3), 289-296.
- Cain, W. (1988). Olfaction. In R. C. Atkinson, R. J. Herrnstein, G. Lindzey & R. D. Luce (Eds.), *Stevens' Handbook of Experimental Psychology: Perception and Motivation*, 1, 409-459. New York: Wiley.
- Celsi, R. L. & Olson, J. C. (1988). The Role of Involvement In Attention and Comprehension Processes. *Journal of Consumer Research*, 15(2), 210-224.
- Chang, S. & Morimoto, M. (2003). An Assessment of Consumer Attitudes toward Direct Marketing Communication Channels: A Comparison between Unsolicited Commercial E-mail and Postal Direct Mail. Paper presented at the Annual convention of The Association for Education in Journalism and Mass Communication, Kansas City, MO.
- Chebat, J. & Michon, R. (2003). Impact of ambient odors on mall shoppers' emotions, cognition, and spending: A test of competitive causal theories. *Journal of Business Research*, 56(7), 529-539.
- Cirrincone, A., Estes, Z. & Carù, A. (2014). The Effect of Ambient Scent on the Experience of Art: Not as Good as It Smells. *Psychology & Marketing*, 31(8), 615-627. doi: 10.1002/mar.20722
- Cooper, G. (2010). How DM bounced back to reach brand new heights. *Marketing Intelligence & Planning*, 3, 16-17.
- Cox, D. F. (1967). The Sorting Rule Model of the Consumer Product Evaluation Process Risk Taking and Information Handling in Consumer Behavior. Boston: Harvard University.
- Davies, B., Kooijman, D. & Ward, P. (2003). The Sweet Smell of Success: Olfaction in Retailing. *Journal Of Marketing Management*, 19(5), 611-627.
- Diego, M., Jones, N., Field, T., Hernandez-Reif, M., Schanberg, S., Kuhn, C. & Galamaga, M. (1998). Aromatherapy positively affects mood, eeg patterns of alertness and math computations. *International Journal Of Neuroscience*, 96(3), 217-224.
- Donovan, R. & Rossiter, J. (1994). Store Atmosphere and Purchasing Behavior. *Journal Of Retailing*, 70(3), 283-294.
- Durango-Cohen, E. J., Torres, R. L. & Durango-Cohen, P. L. (2013). Donor Segmentation: When Summary Statistics Don't Tell the Whole Story. *Journal of Interactive Marketing*, 27(3), 172-184.
- Ehrlichman, H. & Bastone, L. (1992). Olfaction and emotion. In M. J. Serby & K. L. Chobor (Eds.), *Science of Olfaction*, 15, 410-438. New York: Springer-Verlag.
- Ehrlichman, H. & Halpern, J. N. (1988). Affect and memory: effects of pleasant and unpleasant odors on retrieval of happy and unhappy memories. *Journal of Personality and Social Psychology*, 55(1), 769-779.
- Feld, S., Frenzen, H., Krafft, M., Peters, K. & Verhoef, P. C. (2013). The effects of mailing design characteristics on direct mail campaign performance. *International Journal of Research in Marketing*, 30, 143-159. doi: 10.1016/j.ijresmar.2012.07.003
- Francis, L. (1987). Chess Talk in Washington Park: Control in a Miniature World. Paper presented at the The Anthropological Association for the Study of Play, Montreal.
- Goi, M. T., Kalidas, V. & Zeeshan, M. (2014). Personality as a Moderator of SOR Model. *Review of Integrative Business & Economics Research*, 3(2), 67-76.
- Goldstein, E. (2009). Sensation And Perception. Belmont: Wadsworth.
- Greenfield, J. M. (2004). Fundraising Fundamentals: A Guide to Annual Giving for Professionals and Volunteers. New York, NY: John Wiley & Sons.
- Guéguen, N. & Petr, C. (2006). Research note: Odors and consumer behavior in a restaurant *International Journal of Hospitality Management*, 25(1), 335-339.
- Gulas, C. & Bloch, P. (1995). Right under our noses: ambient scent and consumer responses. *Journal of Business & Psychology*, 10(1), 87-98.
- Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E. & Tatham, R. L. (2006). *Multivariate Data Analysis* (6 ed.). New Jersey: Pearson Education.
- Herrmann, A., Zidansek, M., Sprott, D. E. & Spangenberg, E. R. (2013). The power of simplicity: processing fluency and the effects of olfactory cues on retail sales. *Journal of Retailing*, 89(1), 30-43.
- Hirsch, A. R. & Gay, S. (1991). The Effect of Ambient Ol- factory Stimuli on the Evaluation of a Common Consumer Product. Paper presented at the Thirteenth Annual Meeting of the Association for Chemoreception Sciences, Sarasota.

- Hultén, B. . (2012). Sensory cues and shoppers' touching behaviour: the case of IKEA. *International Journal of Retail & Distribution Management*, 40(4), 273-289.
- Hultén, B., Broweus, N. & Dijk, M. . (2009). *Sensory Marketing*. New York: Palgrave Macmillan.
- Jacob, C., Stefan, J. & Gueguen, N. (2014). Ambient scent and consumer behavior: a field study in a florist's retail shop. *International Review of Retail, Distribution & Consumer Research*, 24(1), 116-120.
- Jacoby, J. (2002). Stimulus-Organism-Response Reconsidered: An Evolutionary Step in Modeling (Consumer) Behavior. *Journal of Consumer Psychology*, 12(1), 51-57.
- Kapferer, J. & Laurent, G. (1985). Consumer's involvement profile: New empirical results *Advances in Consumer Research*, 12(1), 290-295.
- Knasko, S. (1995). Pleasant odors and congruency: Effects on approach behavior. *Chemical Senses*, 20(1), 479-487.
- Kotler, P. & Armstrong, G. (2013). *Principles of Marketing*. Boston: Pearson Prentice Hall.
- Kumar, S. & Sharma, R. R. (2014). An Empirical Analysis of Unsolicited Commercial E-mail. *Paradigm*, 18(1), 1-19. doi: 10.1177/0971890714540363
- Laird, D. (1932). How the consumer estimates quality by subconscious sensory impressions. *Journal of Applied Psychology*, 16(3), 241-246.
- Leenders, M., Smidts, A. & Langeveld, M. (1999). Effects of ambient scent in supermarkets: a field experiment. Paper presented at the The 28th EMAC Conference, Umbold University, Berlin, Berlin.
- Lefevre, J. (1988). Row and the Quality of Experience During Work and Leisure. In M. Csikszentmihaiyi & I. S. Csikszentmihaiyi (Eds.). *Optimal Experience: Psychological Studies of Flow in Consciousness*, 1, 307-318. Cambridge: Cambridge University Press.
- Levin, J. & McBumey, D. H. (1986). The Role of Ol- faction in Social Perception and Behavior. In C. P. Herman, M. P. Zanna & E. T. Higgins (Eds.). *Physical Ap- pearance Stigma, and Social Behavior: The Ontario Symposium*, 3, 179-217. Hillsdale: Lawrence Erlbaum Associates.
- Lindstrom, M. (2005). *Brand Sense : How To Build Powerful Brands Through Touch, Taste, Smell, Sight and Sound*. New York Free Press.
- Lipman, J. (1990). Scents That Encourage Buying Couldn't Smell Sweeter to Stores. *Wall Street Journal*, 1(5).
- Lorenxi, P., Friedmaun, R. & Paolillo, J. G. P. (1988). Consumer Mail Survey Responses: More (unibased) bang for the buck. *Journal of Consumer Marketing*, 5(4), 31.
- Lorig, T. & Roberts, M. (1990). Odor and cognitive alteration of the contingent negative variation. *Chemical Senses*, 15(1), 537-545.
- Lorig, T. S. & Schwartz, G. E. (1988). Brain and Odor: I. Alteration of Human EEG' by Odor Administration. *Psychobiology*, 16(1), 281-284.
- Madzharov, A. V., Block, L. G. & Morrin, M. (2015). The Cool Scent of Power: Effects of Ambient Scent on Consumer Preferences and Choice Behavior. *Journal of Marketing*, 79(1), 83-96.
- Malthouse, E. C. (1999). Ridge regression and direct marketing scoring models. *Journal of Interactive Marketing*, 13, 10-23. doi: 10.1002/(SICI)1520-6653(199923)13:4<10::AID-DIR2>3.0.CO;2-3
- Mattila, A. & Wirtz, J. (2001). Congruency of scent and music as a driver of in-store evaluations and behavior. *Journal of Retailing*, 77(2), 273-289.
- Mehrabian, A. & Russell, J. (1974). *An Approach To Environmental Psychology*. Cambridge, MA. The MIT Press.
- Mitchell, D. J., Kahn, B. E. & Knasko, S. C. (1995). There's Something in the Air: Effects of Congruent or Incongruent Ambient Odor on Consumer Decision Making. *Journal of Consumer Research*, 22(2), 229-238.
- Morrin, M. & Ratneshwar, S. (2000). The Impact of Ambient Scent on Evaluation, Attention, and Memory for Familiar and Unfamiliar Brands. *Journal of Business Research*, 49(2), 157-165.
- Morrison, M., Gan, S., Dubelaar, C. & Oppewal, H. (2011). In-store music and aroma influences on shopper behavior and satisfaction. *Journal of Business Research*, 64(6), 558-564.
- Nixdorf, R. R., Teerling, A. & Köster, E. P. (1992). The effect of olfactory stimuli on the time spent by customers in textile-department-stores. Paper presented at the Fourteenth Annual Meeting of the Association for Chemoreception Sciences, Sarasota.
- Odeh, M. R. & As'ad, A. H. (2014). The Impact of Jordanian Shopping Malls' Physical Surrounding on Consumer Buying Behavior: Field Study *International Journal of Marketing Studies*, 6(3), 135-141.
- Orth, U. R. & Bourrain, A. (2005). Ambient scent and consumer exploratory behaviour: A causal analysis. *Journal of Wine Research*, 16(2), 137-150.

- Pagano, R. R. (1994). *Understanding Statistics* (4 ed.). St. Paul, Minnesota: West Publishing Company.
- Parsons, A. (2009). Use of scent in a naturally odourless store *International Journal of Retail & Distribution Management*, 37(5), 440-452.
- Raudenbush, B., Corley, N. & Eppich, W. (2001). Enhancing athletic performance through the administration of peppermint odor. *Journal of Sport & Exercise Psychology*, 23(2), 156-160.
- Roberts, A. & Williams, J. (1992). The effect of olfactory stimulation on fluency, vividness of imagery and associated mood: A preliminary study. *British Journal of Medical Psychology*, 65(1), 197-199.
- Sarathy, P. S. & Patro, S. K. (2013). The Role of Opinion Leaders in High-Involvement Purchases: An Empirical Investigation. *South Asian Journal of Management*, 20(2), 127-145.
- Schifferstein, H. & Blok, S. (2002). The signal function of thematically (In)congruent ambient scents in a retail environment. *Chemical Senses*, 27(6), 539-549.
- Skinner, B. F. (1974). *About Behaviourism*. London: Jonathan Cape Ltd.
- Spangenberg, E., Crowley, A. & Henderson, P. (1996). Improving the Store Environment: Do Olfactory Cues Affect Evaluations and Behaviors? *Journal Of Marketing*, 60(2), 67-80.
- Spangenberg, E. R., Sprott, D. E., Grohmann, B. & Tracy, D. L. (2006). Gender-congruent ambient scent influences on approach and avoidance behaviors in a retail store. *Journal of Business Research*, 59(12), 1281-1287.
- Spence, C. (2012). Managing sensory expectations concerning products and brands: Capitalizing on the potential of sound and shape symbolism. *Journal of Consumer Psychology*, 22(1), 37-54.
- Statista. (2014). from Statista Inc. <http://www.statista.com>
- Suha, M., Moonb, H., Han, H. & Ham, S. (2014). Invisible and intangible, but undeniable: Role of ambient conditions in building hotel guests' loyalty. *Journal of Hospitality Marketing & Management*, Accepted author version posted online: 19
- Takagi, S. (1989). *Human Olfaction*. Tokyo University of Tokyo Press.
- Teller, C. & Dennis, C. (2012). The effect of ambient scent on consumers' perception, emotions and behaviour: A critical review. *Journal Of Marketing Management*, 28(1), 14-36.
- Turley, L. & Milliman, R. (2000). Atmospheric effects on shopping behavior: A review of the experimental evidence. *Journal of Business Research*, 49(2), 193-211.
- Ward, P., Davies, B. & Kooijman, D. (2007). Olfaction and the retail environment: examining the influence of ambient scent. *Service Business*, 4(1), 295-316.
- Warm, J., Dember, W. & Parasuraman, R. . (1991). Effects of olfactory stimulation on performance and stress in a visual sustained attention task. *Journal of The Society of Cosmetic Chemists*, 42(3), 199-210.
- Verma, P. (2014). Is the pleaseure of scent in Luxury store different than convenicene store? *Arabian Journal of Business and Management Review (OMAN Chapter)*, 3(9), 47-85.